



December 30, 2010

Jocelyn Boyd, Esquire
Chief Clerk and Administrator
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.
Power Plant Performance Report
Docket No. 2006-224-E

Dear Mrs. Boyd:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of November 2010.

Sincerely,

Len S. Anthony (by dhs)

Len S. Anthony
General Counsel
Progress Energy Carolinas, Inc.

LSA/dhs
Attachment
45612

c: John Flitter (ORS)

November 2010

The following units had no off-line outages during the month of November:

Brunswick Unit 1
Brunswick Unit 2
Mayo Unit 1
Roxboro Unit 3

Harris Unit 1

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 0:23 on October 2, and was returned to service at 4:30 on November 13, a duration of 1,013 hours and 7 minutes. The unit was offline for 293 hours and 30 minutes during the month of November.
- B. Cause: Scheduled Refueling Outage
- C. Explanation: The unit was taken out of service for a scheduled refueling outage. In addition to normal refueling activities, maintenance, and inspections, replacement of the electric generator and refurbishment of the unit's cooling tower were completed. The cooling tower project is expected to add up to 8 MWs to the unit's summer capacity. The electric generator replacement will support capacity increases in future outages.
- D. Corrective Action: Planned outage activities, including refueling, maintenance activities, and inspections were completed, and the unit was returned to service.

Robinson Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 0:13 on October 7, and was returned to service at 12:36 on November 18, a duration of 1,021 hours and 23 minutes. The unit was offline for 421 hours and 36 minutes during the month of November.
- B. Cause: Automatic reactor trip due to single loop low cooling flow
- C. Explanation: The “C” Reactor Coolant Pump (RCP) motor tripped due to an instantaneous overcurrent trip of load breaker 52/14. This resulted in a single loop low cooling flow, which initiated an automatic reactor scram. Investigation of breaker 52/14 revealed that the breaker had tripped due to exceeding the instantaneous current setting on the “A” and “C” phases. Breaker 52/14 was inspected and cleaned with no deficiencies noted.

Investigation of the “C” RCP motor revealed burnt windings in the stator, and evidence of a small strip of insulation tape in one of the rotor vents and metal splatter on the rotor. The most probable cause of the stator failure is the synergistic effect of excessive vibration due to inadequate end winding bracing, coupled with normal aging and operating conditions, which caused the turn-to-turn insulation to fail. The end windings of both ends of the stator were not lashed to the steel support ring during original machine manufacture by Westinghouse in the 1960’s. Failure of the inter-turn insulation ultimately propagated into a phase-to-phase fault, which resulted in an instantaneous over current trip of the breaker.

- D. Corrective Action: The RCP motor was replaced and other maintenance activities were completed prior to the unit’s return to service.

Roxboro Unit 2

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 23:44 on November 26, and remained offline for the remainder of the month. The unit was offline for 96 hours and 16 minutes during the month of November.
- B. Cause: Boiler Inspection Outage
- C. Explanation: The unit was taken out of service for planned boiler inspections and maintenance.
- D. Corrective Action: Planned outage activities and inspections were in progress at the end of November.

Roxboro Unit 4

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 22:56 on November 5, and was returned to service at 8:19 on November 22, a duration of 394 hours and 23 minutes.
- B. Cause: Boiler Inspection Outage
- C. Explanation: The unit was taken out of service for planned boiler inspections and maintenance.
- D. Corrective Action: Planned outage activities, including boiler inspection, periodic, preventative, and corrective maintenance were completed, and the unit was returned to service.

	Month of November 2010		Twelve Month Summary		See Notes*
MDC	975 MW		957 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	700,692 MWH		6,813,297 MWH		2
Capacity Factor	99.68 %		81.33 %		
Equivalent Availability	99.99 %		81.40 %		
Output Factor	99.68 %		98.53 %		
Heat Rate	10,244 BTU/KWH		10,430 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	1,382,550	16.50	3
Partial Scheduled	0	0.00	91,134	1.09	4
Full Forced	0	0.00	80,199	0.96	5
Partial Forced	2,283	0.32	84,972	1.01	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	702,975		8,378,940		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of November 2010		Twelve Month Summary		See Notes*
MDC	953 MW		937 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	675,104 MWH		8,011,023 MWH		2
Capacity Factor	98.25 %		97.67 %		
Equivalent Availability	99.18 %		97.58 %		
Output Factor	98.25 %		99.04 %		
Heat Rate	10,525 BTU/KWH		10,620 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	71,971,871	877.31	3
Partial Scheduled	23	0.00	39,459	0.48	4
Full Forced	0	0.00	7,164	0.09	5
Partial Forced	11,986	1.74	75,549	0.92	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	687,113		8,203,740		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of November 2010		Twelve Month Summary		See Notes*
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MDC	936 MW		918 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	336,596 MWH		7,078,352 MWH		2
Capacity Factor	49.88 %		88.03 %		
Equivalent Availability	49.20 %		87.40 %		
Output Factor	84.12 %		99.81 %		
Heat Rate	10,560 BTU/KWH		10,696 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
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Full Scheduled	274,716	40.71	948,278	11.79	3
Partial Scheduled	68,117	10.09	84,757	1.05	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	0	0.00	12,469	0.16	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	674,856		8,041,680		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of November 2010		Twelve Month Summary		See Notes*
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MDC	758 MW		740 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	207,498 MWH		3,592,835 MWH		2
Capacity Factor	37.97 %		55.45 %		
Equivalent Availability	39.37 %		55.10 %		
Output Factor	91.43 %		99.08 %		
Heat Rate	11,124 BTU/KWH		10,833 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
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Full Scheduled	0	0.00	1,644,116	25.37	3
Partial Scheduled	0	0.00	21,363	0.33	4
Full Forced	319,573	58.47	1,209,120	18.66	5
Partial Forced	19,447	3.56	58,356	0.90	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	546,518		6,480,940		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

	Month of November 2010		Twelve Month Summary		See Notes*
MDC	726 MW		728 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	391,173 MWH		4,864,515 MWH		2
Capacity Factor	74.73 %		76.30 %		
Equivalent Availability	99.99 %		94.83 %		
Output Factor	74.73 %		80.71 %		
Heat Rate	10,241 BTU/KWH		10,477 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	268,017	4.20	3
Partial Scheduled	0	0.00	53,366	0.84	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	40	0.01	7,216	0.11	6
Economic Dispatch	132,233	25.26	1,182,223	18.54	7
Possible MWH	523,446		6,375,090		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of November 2010		Twelve Month Summary		See Notes*
MDC	671 MW		667 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	371,852 MWH		3,970,704 MWH		2
Capacity Factor	76.86 %		68.01 %		
Equivalent Availability	86.65 %		75.47 %		
Output Factor	88.71 %		87.33 %		
Heat Rate	8,709 BTU/KWH		8,955 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	64,595	13.35	1,118,771	19.16	3
Partial Scheduled	0	0.00	74,696	1.28	4
Full Forced	0	0.00	161,917	2.77	5
Partial Forced	0	0.00	78,996	1.35	6
Economic Dispatch	47,344	9.79	432,056	7.40	7
Possible MWH	483,791		5,838,540		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of November 2010		Twelve Month Summary		See Notes*
MDC	698 MW		696 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	364,122 MWH		4,812,285 MWH		2
Capacity Factor	72.35 %		78.97 %		
Equivalent Availability	99.85 %		98.28 %		
Output Factor	72.35 %		79.74 %		
Heat Rate	10,112 BTU/KWH		10,651 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	58,905	0.97	3
Partial Scheduled	0	0.00	10,164	0.17	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	747	0.15	35,286	0.58	6
Economic Dispatch	138,389	27.50	1,177,247	19.32	7
Possible MWH	503,258		6,094,040		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of November 2010		Twelve Month Summary		See Notes*
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MDC	711 MW		705 MW		1
Period Hours	721 HOURS		8,760 HOURS		
Net Generation	122,732 MWH		4,506,788 MWH		2
Capacity Factor	23.94 %		73.03 %		
Equivalent Availability	45.24 %		93.74 %		
Output Factor	52.85 %		76.63 %		
Heat Rate	11,983 BTU/KWH		11,708 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
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Full Scheduled	280,406	54.70	289,377	4.69	3
Partial Scheduled	0	0.00	66,980	1.09	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	300	0.06	32,649	0.53	6
Economic Dispatch	109,193	21.30	1,275,158	20.66	7
Possible MWH	512,631		6,171,420		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

Plant	Unit	Current MW Rating	January 2009 - December 2009	November 2010	January 2010 - November 2010
Asheville	1	196	70.87	67.86	72.68
Asheville	2	187	59.45	64.66	68.42
Cape Fear	5	148	63.73	53.94	72.17
Cape Fear	6	175	62.21	69.94	71.26
Lee	1	80	50.63	5.18	64.60
Lee	2	80	41.80	32.32	53.57
Lee	3	257	58.82	60.73	70.36
Mayo	1	726	62.45	74.73	75.46
Robinson	1	179	61.18	47.42	63.78
Roxboro	1	374	79.40	80.52	81.46
Roxboro	2	671	73.67	76.86	65.89
Roxboro	3	698	62.76	72.35	79.67
Roxboro	4	711	71.40	23.94	72.39
Sutton	1	98	39.14	26.50	47.58
Sutton	2	107	44.65	15.64	48.59
Sutton	3	411	48.01	9.77	47.89
Weatherspoon	1	49	13.92	14.55	37.61
Weatherspoon	2	49	14.93	14.55	33.22
Weatherspoon	3	79	23.59	28.89	49.02
Fossil System Total		5,275	62.52	54.63	68.76
Brunswick	1	975	97.67	99.68	79.47
Brunswick	2	953	79.50	98.25	97.17
Harris	1	936	93.90	49.88	86.58
Robinson Nuclear	2	758	104.08	37.97	50.87
Nuclear System Total		3,622	93.18	73.52	80.00
Total System		8,897	74.79	62.32	73.31

Amended SC Fuel Rule
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of $\geq 92.5\%$ during the 12 month period under review. For the test period March 1, 2010 through November 30, 2010, actual period to date performance is summarized below:

Period to Date: March 1, 2010 to November 30, 2010

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period A = 17,953,352 MWH

B. Total number of hours during SCPSC test period B = 6,600 hours

C. Nuclear system MDC during SCPSC test period (see page 2) C = 3,482 MW

D. Reasonable nuclear system reductions (see page 2) D = 5,496,631 MWH

A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 = 102.0\%$

NOTE:

If Line Item E $> 92.5\%$, presumption of utility's minimum cost of operation.

If Line Item E $< 92.5\%$, utility has burden of proof of reasonable operations.

Amended SC Fuel Rule
Nuclear System Capacity Factor Calculation
Reasonable Nuclear System Reductions
Period to Date: March 1, 2010 to November 30, 2010

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	920 MW	900 MW	724 MW	3,482 MW
Reasonable refueling outage time (MWH)	1,335,783	0	948,277	1,644,116	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	92,918	33,033	2,368	1,229,752	
Reasonable coast down power reductions (MWH)	0	0	7,476	0	
Reasonable power ascension power reductions (MWH)	55,192	464	68,117	33,132	
Prudent NRC required testing outages (MWH)	24,072	21,332	599	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	0	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	1,507,965	54,829	1,026,837	2,907,000	
Total reasonable outage time exclusions [carry to Page 1, Line D]					5,496,631